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PATENT
YR0-61

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

In re Application of: R. A. WIEDEMAN ET AL	: Date: March 6, 2006
Serial No.: 09/751,765	:
Filed: December 29, 2000	: Group Art Unit: 2681
For: METHOD AND APPARATUS PROVIDING SUPPRESSION OF SYSTEM ACCESS BY USE OF CONFIDENCE POLYGONS, VOLUMES AND SURFACES IN A MOBILE SATELLITE SYSTEM	: Examiner: Sheila B. Smith

APPEAL BRIEF TRANSMITTAL LETTER

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is an Appeal Brief, in triplicate, for the above patent application.

___ Appellant petitions for an extension of time for month(s). If an additional extension of time is required, please consider this a petition therefor.
Fee:

___ An extension for month(s) has already been secured; the fee paid therefore is deducted from the total fee due for the total months of extension now requested. Extension fee due with this request:

_X_ Appellant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that appellant has inadvertently overlooked the need for a petition for extension of time.

___ The Appeal Brief Fee was paid in a prior appeal in which there was no decision on the merits by the Board of Appeals.

_X_ Charge the Appeal Brief Fee to my Credit Card. Credit Card Payment Form PTO-2038 is enclosed herewith.

_X_ The total fee due is $500.00

_X_ Address all correspondence to Joyce Kosinski, Karambelas & Associates, 655 Deep Valley Drive, Suite 303, Rolling Hills Estates, CA 90274.

This letter is submitted in triplicate.

Respectfully submitted,

AWKarambelas

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PATENT
Docket No. YR0-61

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Robert A. Wiedeman et al
SERIAL NUMBER:	09/751,765
FILING DATE:	December 29, 2000
FOR:	Method and Apparatus Providing Suppression of System Access By Use of Confidence Polygons, Volumes and Surfaces in a Mobile Satellite System
GROUP ART UNIT:	2681
EXAMINER:	Sheila B. Smith

CERTIFICATE OF MAILING UNDER 37 CFR 1.8

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Identification of Transmitted Papers

Appeal Brief in triplicate, Appeal Brief Transmittal Letter in triplicate, Credit Card Payment Form PTO-2038, return receipt postcard

I hereby certify that the above-identified correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on **March 6, 2006**.

Joyce E. Kosinski
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PATENT
YR0-61

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS

Appeal No._____

In re Application of: ROBERT A. WIEDEMAN ET AL

Serial No.: 09/751,765

Filed: December 29, 2000

For: METHOD AND APPARATUS PROVIDING SUPPRESSION OF SYSTEM ACCESS BY USE OF CONFIDENCE POLYGONS, VOLUMES AND SURFACES IN A MOBILE SATELLITE SYSTEM

APPELLANTS' BRIEF ON APPEAL

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS

In re Application of: R. A. WIEDEMAN ET AL	:	Date: March 6, 2006
Serial No.: 09/751,765	:	
Filed: December 29, 2000	:	Group Art Unit: 2681
For: METHOD AND APPARATUS PROVIDING SUPPRESSION OF SYSTEM ACCESS BY USE OF CONFIDENCE POLYGONS, VOLUMES AND SURFACES IN A MOBILE SATELLITE SYSTEM	:	Examiner: Sheila B. Smith

APPELLANTS' BRIEF ON APPEAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal is taken from the decision of the Examiner in the Office Action dated December 14, 2005 finally rejecting Claims 1-25 of the above-identified patent application. This brief is submitted in accordance with the provisions of 37 C.F.R. §41.37.

REAL PARTY IN INTEREST

The real party in interest is Globalstar L.P. which acquired rights to the present application by way of an assignment from the inventors.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellants, Appellants' legal representative, or the assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1-26 are currently pending in this application. Claims 1-25 were finally rejected in the Office Action dated December 14, 2005. Appellants appeal from this final rejection of claims 1-25. Claim 26 is allowed.

STATUS OF AMENDMENTS

A communication dated January 17, 2006 responsive to the final rejection was filed with no amendments made therein.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention provides that the teachings can be employed to control the actions of a user terminal (UT) located at a remote location, possibly far from a gateway (GW), which has an interface to the Public Switched Telephone Network (PSTN) and/or to the Internet or to any other kind of network, either mobile or fixed. These teachings employ a computer generated and stored database of an area (referred to as a Confidence Polygon), a volume (referred to as a Confidence Volume), and/or a plane (referred to as a Confidence Surface) to establish a geometric shape located on the earth, above the earth or in space, or combinations thereof. In addition, there is assigned to these areas, volumes and/or planes a static or a variable value referred to as a Confidence Limit (CL) that can be compared to a value of an error (E) in a position location of the UT. The error signal can either be generated by the UT or by the GW. A controller, preferably a part of the GW, acts upon the database of the geometric shapes, and the assigned or derived values of CL and E, to determine if the comparison of CL and E, combined with the current position of the UT, yields a certain result according to the operational mode of the GW controller. There can be many operational modes of the controller. Depending on the operational mode the result of the comparison of the CL assigned to the area, volume or plane is used to affect control of the UT or an external device attached to the UT. By example, the UT may be forbidden or allowed to access the system or to make or receive a call, or some operational characteristic(s) of the UT may be specified, such as transmitter power, frequency, and the like. The end result, by example, is an ability to provide protection for a site, such as a radio astronomy site from UT emissions.

Also disclosed is a method for operating a mobile satellite communication system having at least one GW, at least one user terminal UT, and a constellation of satellites. The method includes steps of, for a site to be protected, for example, from UT transmissions, specifying an exclusion or inclusion zone having a confidence limit (CL) associated therewith; and selectively providing service to a UT depending on a determined location of the UT relative to the exclusion or inclusion zone and on an estimated error (E) of the determined UT location. The exclusion or inclusion zone is specified to be at least one of a polygon that defines an area, a volume, or a surface. The location of the UT can be determined by the UT by its own internal calculations, or by using an external source such as GPS, and transmitted to the GW, or the location of the UT can be determined by the UT in cooperation with the GW, or the location of the UT is determined by the GW. The

UT is granted service or denied service if the value of E is less than CL, and the GW may set the value of CL to be less than a possible minimum value of E for excluding all UTs from operating within the exclusion zone, or it may set the value of CL to be greater than a possible maximum value of E for enabling all UTs to operate within the exclusion zone. Overlapping exclusion zones may be specified, each having a different value of CL, and exclusion zones may be shared by two or more GWs. Boundaries of the exclusion zone can be fixed and static, or they may be dynamic and capable of movement, with variability being a function of, for example, time, or a location of the UT or the GW, or a location of the site to be protected. The exclusion zone may be temporary and established and removed as a function of time, and the values of at least one of CL and E may vary as a function of time. At least one of the location or shape of the exclusion or inclusion zone may vary as a function of a location of the UT, or as a function of a location of the GW. The exclusion or inclusion zone may be combinations of Confidence Polygons, Confidence Volumes or Confidence Surfaces. The value of E may be a function of the accuracy of the UT local oscillator, and information that specifies the accuracy of the UT local oscillator can be stored or determined by the UT and sent to the GW, and/or stored in the GW, and/or stored in a home GW of the UT, and transferred from the home GW to a serving GW when the UT is roaming. In addition the value of E for the user terminal may be supplied over a network from a home (HLR) or other location register.

The operation of this invention can be used as a switch, to cause a certain activity by either the user terminal or the gateway, which is based on the location of the user terminal within a service area.

The subject matter defined in independent claim 1 involved in the appeal can be found in the specification on page 4, second paragraph; and in Figures 1-5 wherein there is shown a method for operating a mobile satellite communication system having at least one gateway (GW), at least one user terminal (UT), and a constellation of satellites, comprising steps of for a site to be protected from UT transmissions, specifying an exclusion zone having a confidence limit (CL) associated therewith and selectively providing service to a UT depending on a determined location of the UT relative to the exclusion zone and on an estimated error (E) of the determined UT location .

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al U. S. Patent No. 6,018,660 in view of Martti et al U. S. Patent No. 6,718,169.

2. Claims 2-12 and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al in view of Martti et al and further in view of Maeda et al U. S. Patent No. 6,352,222.
3. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al in view of Martti et al in view of Maeda et al and further in view of Ishikawa et al U. S. Patent No. 6,332,069.

ARGUMENT

Rejection under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al U. S. Patent No. 6,018,660 in view of Martti et al U. S. Patent No. 6,718,169

The Examiner has rejected claim 1 under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al U. S. 6,018,660 in view of Martti et al U. S. 6,718,169.

The Examiner states regarding claim 1, Alperovich et al discloses essentially all the claimed invention as set forth in the instant application, further Alperovich et al discloses an apparatus and method for grouping carriers to minimize the occurrence of call blocking in a satellite-based communications network. In addition, the Examiner states, Alperovich et al discloses a method for operating a mobile satellite communication system having at least one gateway (350), at least one user terminal (300), comprising steps of: for a site to be protected from UT transmissions, specifying an exclusion zone (which reads on "If the satellite subscriber's actual geographic location is within the area prescribed to the barring feature, the barring feature is invoked", as disclosed in col. 3, lines 9-11) associated therewith; and selectively providing service to a UT (300) depending on a determined location of the UT relative to the exclusion zone (which reads on, as disclosed in col. 15, lines 13-17) and on an estimate of the determined UT location (which reads on "Otherwise, the barring feature is not invoked", as disclosed in col. 3, lines 11-12). However, the Examiner submits, Alperovich et al fails to specifically disclose (a) the use of a constellation of satellites, and (b) a confidence limit (CL) and the estimated error (E).

The Examiner contends, however, that (a) the use of a constellation of satellites is well known in the art and at the time of the invention it would have been obvious to a person of ordinary skill in the art to improve Alperovich et al by modifying the system and method for invoking barring features in a satellite network with a constellation of satellites for the purpose of operating a satellite communication system.

The Examiner further states that in the same field of endeavor, Martti et al discloses a method for determining a confidence limit and, in addition, Martti et al discloses the use of (b) a confidence limit and estimated error (which reads on col. 1, lines 60-67 and col. 2, lines 1-45.

The Examiner concludes that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Alperovich et al by modifying the a position location system with a confidence limit and estimated error as taught by Martti et al for the purpose of setting the target value.

The Examiner contends, at col. 3, lines 9-11 in Alperovich et al, there is disclosed "If the satellite subscriber's actual geographic is within the area prescribed to the barring feature, the barring feature is invoked. Otherwise, the barring feature is not invoked." Further, the Examiner contends that at col. 4, not col. 15 as stated by the Examiner, lines 13-17 it is stated "The MS 300 then registers with the indicated MSC/VLR 340, and sends a SETUP message to the new MSC/VLR 340 via the satellite 310 and the new SBSS 345, as is understood in the art. The call can then be completed normally using minimal terrestrial circuits and existing satellite resources."

Appellants respectfully submit that Alperovich et al U. S. 6,018,660 is directed to a telecommunications system and method for invoking barring features within a satellite network when calls to a subscriber within the satellite network are optimized. When a call is optimized for the satellite subscriber, the actual geographic location of the satellite subscriber is sent to the HLR and the new (optimal) MSC/VLR. This location can be sent as an MSC address, or other form. Therefore, when a barring feature is associated with the call, this MSC address is checked by the serving MSC or the HLR (in the case of barring of incoming calls when roaming outside of the home Public Land Mobile Network country). If the satellite subscriber's actual geographic location is within the barred area, the barring feature is invoked. Otherwise, the barring feature is not invoked.

Appellants have responded to the Examiner's contention regarding selectively providing service to a UT 300 depending on a determined location of the UT relative to the exclusion zone (which the Examiner contends reads on as disclosed in col. 15, lines 13-17 but Appellants have addressed col. 4, lines 13-17 as recited above). Further, Appellants respectfully submit at col. 3, lines 11-12 it is merely stated as previously recited "Otherwise, the barring feature is not invoked."

Appellants gratefully acknowledge the Examiner's admission with regard to Alperovich et al failing to specifically disclose (a) the use of a constellation of satellites and (b) a confidence limit (CL) and the estimated error (E).

In Martti et al at col. 1, lines 60-67 and col. 2, lines 1-45 there is disclosed, respectively, "A problem with the above arrangement is that the confidence limit to be set for each indicator is defined as a fixed value. At first, each network element type is typically given the same fixed confidence limit which the operator can change network-specifically, when needed. However, when a fixed confidence limit is used, special situations due to changes in traffic volumes cannot be taken into account. If a less busy network element is

"given the same confidence limits as a busy network element, even a minor exception from the normal number of faults may cause an error notification from the less busy network element because the number of fault situations is calculated as a percentage of the total traffic volume." Thereafter, inter alia there is a discussion of confidence limits and confidence intervals when traffic volumes increase and decrease.

Appellants respectfully contend that no where in Martti et al in the drawings or specification, including the passages relied upon by the Examiner, is there any suggestion, implication or teaching that the system as disclosed in Martti et al may be employed in a satellite based system such as Alperovich et al. In col. 8, lines 47 et seq. in order to broaden the application of the system defined in Martti et al it is stated "It is apparent to a person skilled in the art that the invention can be applied to any other similarly functioning network, such as the public switched telephone network (PSTN)." Clearly, Appellants respectfully submit that this is intended to be a terrestrially based network and has no application or suggestion that it can be used in a satellite based network as is employed by Alperovich et al. Further, Appellants respectfully submit there is no motivation in Alperovich et al, as is seen in Martti et al, to combine the teachings of same since they are in distinct and separate fields of endeavor.

Appellants respectfully disagree that the use of a constellation of satellites is well known in the art and at the time of the invention it would have been obvious to a person of ordinary skill in the art to improve Alperovich et al by modifying the system and method for invoking barring features in a satellite network with a constellation of satellites for the purpose of operating a satellite communication system. In addition to being in different fields of endeavor, Appellants respectfully conclude that the joinder of Martti et al and Alperovich et al is improper further in view of the mere disclosure of a barring feature in Alperovich et al with no teaching, suggestion or implication that it in any way relates to a confidence limit associated therewith as required in element 1 of claim 1 and, further, selectively providing service to a UT depending on a determined location of the UT relative to the exclusion zone and on an estimated error (E) of the determined UT location as is required by element 2 of claim 1 which is conspicuously absent in both of Alperovich et al and Martti et al. Further, Appellants respectfully submit there is no teaching or suggestion in either reference that they be combined in the manner suggested by the Examiner and consequently no motivation to do so.

Appellants respectfully submit that in Martti et al at col. 1, lines 60-67 and col. 2, lines 1-45 there is a broad-ranging discussion of confidence limits which are set and confidence intervals which are set according to traffic volume increases and decreases. Appellants respectfully submit there is no teaching, suggestion or implication of an exclusion zone having a confidence limit associated therewith as required in element 1 of

claim 1, nor of providing service to a UT depending on a determined location of the UT relative to the exclusion zone and on an estimated error of the determined UT location as required in element 2 of claim 1 which is conspicuously absent in both references.

Therefore, Appellants respectfully disagree that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Alperovich et al by modifying the a position location system with a confidence limit and estimated error as taught by Martti et al for the purpose of setting the target value.

Appellants respectfully submit that nothing in the further recited sections of Alperovich et al, neither at col. 3, lines 9-11 nor at col. 4, lines 13-17, is there taught, suggested or implied an exclusion zone having a confidence limit associated therewith as required in element 1 of claim 1, nor of providing service to a UT depending on a determined location of the UT relative to the exclusion zone and on an estimated error of the determined UT location as required in element 2 of claim 1 which is conspicuously absent in both references.

Appellants respectfully disagree with the Examiner's contention that barring the features associated with a certain geographical area reads on the limitation of an exclusion zone. This statement, which Appellants respectfully contend is not supported by the references or the prior art, in addition to the Merriam Webster's Collegiate Dictionary Tenth Edition definition of "exclude" as meaning "to bar from participation" coupled with the disclosure of Alperovich et al, col. 3, lines 5-12, does not adequately meet this limitation as contended by the Examiner. Furthermore, Martti et al, used by the Examiner to disclose the common use of a confidence limit and an estimated error, and Maeda, used to disclose the common use of the polygon to define an area, a volume or a surface, does little as well to cure the deficiencies of these rejections.

Rejection under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al in view of Martti et al and further in view of Maeda et al U. S. Patent No. 6,352,222

The Examiner has rejected claims 2-12 and 19-25 under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al in view of Martti et al and further in view of Maeda et al U. S. Patent No. 6,352,222.

The Examiner states regarding claims 2, 6, 8, 9, Alperovich et al in view of Martti et al discloses everything claimed as applied above, directing Appellants' attention to claim 1, however, Alperovich et al fails to specifically disclose the use of the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface.

The Examiner states, however, that Maeda et al, in the same field of endeavor, discloses a satellite, satellite control method and satellite communication system and, in

addition, Maeda et al discloses the use of an exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface (which reads on this as to form such a polygon that includes all the service areas, as disclosed in col. 10, lines 37-39).

Therefore, the Examiner contends it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Alperovich et al by modifying the a position location system with the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface as taught by Maeda et al for the purpose of setting the initial value for the orbital inclination angle.

Appellants respectfully submit that claim 1 has been shown to be patentably distinguishable over Alperovich et al in view of Martti et al for reasons recited above which are equally applicable to claims 2, 6, 8 and 9, which reasons are hereby respectfully incorporated by reference.

In Maeda et al there is disclosed "In order to establish the communication lines among the movable bodies and/or fixed stations and to configure communication system with a small number of satellites, present method has the steps of determining six orbit-related parameters by using a input conditions including a geographical condition of the service area, a desired service time and the tolerance of an ascending vertical angle within which the satellite can be viewed from the service area, and establishing the satellite communication with one or more satellites, an individual satellite being arranged on the orbits selected and combined among plural elliptical orbits corresponding to the determined six orbit-related parameters on which the satellites stay for a sufficiently long time that they may come successfully into sight in the zenith direction."

At col. 10, lines 37-39 of Maeda et al Appellants respectfully submit there is disclosed "This polygon can be formed by plural adjoining triangles." Previous to that Appellants note in col. 10, lines 32 et seq. it is stated "Those four locations are as shown in Fig. 7 and their altitude and longitude do not take an identical value generally. In case some service area is not included in a quadrangle having those locations at its corners, additional locations with their own latitude, longitude and elevation are defined so as to form such a polygon that includes all the service areas."

Appellants respectfully submit at col. 5, lines 19 et seq. in Maeda et al it is stated "In order to achieve the above objects, in accordance with the present invention, in an artificial satellite traveling along an elliptical orbit, the elliptical orbit is defined by six orbit-related parameters obtained with input conditions, including the geographical condition of the service area to be covered by the artificial satellite, the tolerance of the ascending vertical angle within which the artificial satellite can be viewed from the service area, and the reference time defining the orbit elements."

Appellants respectfully submit that Maeda et al is not seen to teach, suggest or imply exclusion zones having a confidence limit associated therewith as required by element 1 of claim 1, nor is it seen to teach, suggest or imply selectively providing service to a UT depending on a determined location of the UT relative to the exclusion zone and on an estimated error of the determined UT location as required by element 2 of claim 1 from which claims 2-8 depend.

Appellants respectfully submit that the quadrangle polygons and triangles referred to in Maeda et al relate solely to service areas and not to exclusion zones as required in the claims of the instant invention.

Furthermore, aside from the use of a satellite in Maeda et al and Alperovich et al, there is no similarity at all with regard to configuring a communication system with a small number of satellites having the steps of determining six orbit-related parameters by using input conditions including geographical conditions inter alia as defined in Maeda et al with a telecommunications system disclosed for invoking barring features within a satellite network when calls to a subscriber within the satellite network are optimized as found in Alperovich et al.

Appellants respectfully submit that further combination of Martti et al relating to determining a confidence limit for a telecommunication network element in a terrestrial system is totally inappropriate with either Maeda et al or Alperovich et al, there being no suggestion in any of these references that they should be combined in the manner suggested by the Examiner by one of ordinary skill in the art.

In summary, Martti et al does not teach, suggest or imply the subject matter of claim 1, nor that of claims 2, 6, 8 and 9, and appears to relate solely to a terrestrial system for determining inter alia a confidence limit for a telecommunication network element whereby the number of data transmission connections established through the network element is stored into a database and a relative value as a ratio of the number of faulty operations in the network element to the number of data transmission connections is determined; while Alperovich et al fails to teach the use of satellite constellations or the use of exclusion zones but merely relates to invoking barring features within a satellite network when calls to a subscriber within the satellite network are optimized; and, finally, Maeda et al discloses inter alia a method employing the steps of determining six orbit-related parameters by using input conditions including a geographical condition of the service area, a desired service time and the tolerance of an ascending vertical angle within which the satellite can be viewed from the service area, and establishing the satellite communication with one or more satellites, and does not teach, suggest or imply exclusion zones.

Appellants therefore respectfully disagree that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Alperovich

et al, which is directed as recited above, by modifying the a position location system with the exclusion zone, conspicuously absent in all of the references including Maeda et al, to comprise at least one of a polygon that defines an area, a volume, or a surface as taught by Maeda et al for the purpose of setting the initial value for the orbital inclination angle.

The Examiner states regarding claims 3-5, Alperovich et al in view of Martti et al and further in view of Martti et al (Maeda et al) discloses everything claimed as applied above, directing Appellants' attention to claim 1, in addition Alperovich et al discloses a location of the UT (300) is determined by the UT (300), and transmitted to the GW (which reads on the MSC/VLR) as disclosed in col. 4, lines 23-27.

Appellants respectfully submit that claims 3-5 have been shown to be patentably distinguishable over Alperovich et al in view of Martti et al and further in view of Maeda et al for reasons recited above which are hereby respectfully incorporated by reference. Furthermore, Appellants respectfully submit that at col. 4, lines 23-27 in Alperovich et al it is merely stated "However, when such call optimization is performed, barring features associated with the call may not be implemented correctly because the location of the MS is now considered to be the location of the new (optimal) MSC/VLR where the MS is registered." Appellants respectfully submit that this does not teach, suggest or imply the method as defined in claim 1 wherein the location of the UT is determined by the UT and transmitted to the GW as required in claim 3; the method as defined in claim 1 wherein the location of the UT is determined by the UT in cooperation with the GW as required by claim 4; or the method as defined in claim 1 wherein the location of the UT is determined by the GW as required by claim 5.

The Examiner states regarding claim 7, Alperovich et al in view of Martti et al discloses everything claimed as applied above, directing Appellants' attention to claim 1, in addition Alperovich et al discloses the UT (300) is granted service if the value of E is less than CL (which reads on "Otherwise, the barring feature is not invoked", as disclosed in col. 3, lines 11-12).

Appellants respectfully submit that claim 7 has been seen to be patentably distinguishable over Martti et al for the reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference and, furthermore, the recitation relied upon by the Examiner at col. 3, lines 11-12, which merely states "Otherwise, the barring feature is not invoked," does not teach, suggest or imply that the UT is granted service if the value of E is less than CL, nor do these terms or their equivalents appear in said reference.

The Examiner states regarding claim 10, Alperovich et al in view of Martti et al discloses everything claimed as applied above, directing Appellants' attention to claim 1, in addition Alperovich et al discloses the exclusion zone is specified to comprise a surface

defined by at least two connected points on the surface of the earth and at least point located above the surface of the earth as disclosed in col. 2, lines 48-59.

Appellants respectfully submit that claim 10 has been shown to be patentably distinguishable over Alperovich et al in view of Martti et al for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference. Furthermore, Appellants respectfully contend that Alperovich et al does not teach, suggest or imply an exclusion zone which is specified to comprise a surface defined by at least two connected points on the surface of the earth and at least point located above the surface of the earth as required by claim 10. Appellants respectfully submit this is not to be found in Alperovich et al at col. 2, lines 48-59 which relates inter alia to a geostationary satellite network which is optimized so that a subscriber is reallocated to the MSC/VLR which is the most optimal for a given call.

The Examiner states regarding claims 11-12, Alperovich et al in view of Martti et al discloses everything claimed as applied above, directing Appellants' attention to claim 1, in addition Alperovich et al discloses boundaries of the exclusion zone are static as disclosed in col. 4, lines 23-27.

Appellants respectfully submit that claims 11-12 have been shown to be patentably distinguishable over Alperovich et al in view of Martti et al for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference. Furthermore, Appellants respectfully submit that in Alperovich et al at col. 4, lines 23-27 there is disclosed "However, when such call optimization is performed, barring features associated with the call may not be implemented correctly because the location of the MS is now considered to be the location of the new (optimal) MSC/VLR where the MS is registered." This recitation relied upon by the Examiner in no way teaches, suggests or implies that the method of claim 1 possesses boundaries of the exclusion zone that are static as required in claim 11, nor that the method as defined in claim 1 contains boundaries of the exclusion zone which are dynamic and capable of at least one of movement or change in shape as required in claim 12. Appellants' comments with respect to improper joinder as recited above apply and are hereby respectfully incorporated by reference.

The Examiner states regarding claims 19-25, Alperovich et al in view of Martti et al discloses everything claimed as applied above, directing Appellants' attention to claim 1, in addition Alperovich et al discloses wherein there are overlapping exclusion zones specified, each having a different value of CL as disclosed in col. 4, lines 23-27.

Appellants respectfully submit that claims 19-25 have been shown to be patentably distinguishable over Alperovich et al in view of Martti et al for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference and, furthermore, the recitation relied upon by the Examiner at col. 4, lines 23-27 does little to cure these

deficiencies. Nothing in col. 4, lines 23-27 suggests, teaches or implies overlapping exclusion zones each having a different value of CL as required by claim 19; the exclusion zone is temporary and is established and removed as a function of time as required by claim 20; wherein the values of at least one of CL and E vary as a function of time as required by claim 21; wherein at least one of the location or shape of the exclusion zone varies as a function of a change in location of the UT as required by claim 22; wherein at least one of the location or shape of the exclusion zone varies as a function of a change in location of the GW as required by claim 23; wherein at least one of the location or shape of the exclusion zone varies as a function of a change in location of the protected site as required by claim 24; nor wherein the exclusion zone is shared between at least two gateways as required by claim 25. Appellants' comments with respect to improper joinder as recited above apply and are hereby respectfully incorporated by reference.

Rejection under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al in view of Martti et al in view of Maeda et al and further in view of Ishikawa et al U. S. Patent No. 6,332,069

The Examiner has rejected claims 13-18 under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al in view of Martti et al in view of Maeda et al and further in view of Ishikawa et al U. S. Patent No. 6,332,069 (should be U. S. Patent No. 5,969,669).

The Examiner states regarding claims 13-18, Alperovich et al in view of Martti et al in view of Maeda et al discloses everything claimed as applied above, directing Appellants' attention to claim 1, however, Alperovich et al in view of Maeda et al fails to specifically disclose the use of the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the UT.

The Examiner contends that in the same field of endeavor, Ishikawa et al discloses a method for determining position of mobile earth station in satellite communication system. In addition, according to the Examiner, Ishikawa et al discloses the use of the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the GW (which reads on t is possible to perform high accuracy position determination by estimating and compensating for the timing error arising from instability in the accuracy of the clock of the mobile earth station and the frequency error resulting from instability of the frequency oscillator of the mobile earth station, as disclosed in col. 6, lines 10-20).

Therefore, the Examiner concludes it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Alperovich et al in

view of Maeda et al with the use of the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the UT as taught by Ishikawa et al for the purpose of determining the estimated position of the mobile earth station relative to its true position.

Appellants respectfully submit that claims 13-18 have been shown to be patentably distinguishable over Alperovich et al in view of Martti et al, further in view of Maeda et al and further in view of Ishikawa et al (U. S. Patent No. 5,969,669) for reasons recited above which are hereby respectfully incorporated by reference.

Appellants respectfully submit for reasons recited above with respect to improper joinder inter alia that Alperovich et al is not properly combinable with Martti et al nor with Maeda et al nor Ishikawa et al for reasons recited above, and, further, there is not to be found in any of these references any suggestion or motivation to one of ordinary skill in the art to combine them.

Appellants respectfully submit that In Ishikawa et al '669 at col. 6, lines 10-20 there is a discussion inter alia relating to measured distances and Doppler shift amounts between the mobile earth station and the non-geostationary satellite, which are measured at different local times, errors in time which are attributable to instability in the position of the mobile earth station and in the accuracy of the clock.

Appellants respectfully submit that the reference to errors in time which are attributable to instability in the position of the mobile earth station does not teach, suggest or imply the value E is a function of the accuracy of the UT local oscillator as required in claim 1; and where information that specifies the accuracy of the UT local oscillator is stored in the UT as incorporated in method claim 1, as required in claim 13; a method in claim 1 where the value of E is a function of the accuracy of the UT local oscillator and where information that specifies the accuracy of the UT local oscillator is stored in the GW as required by claim 14; a method as in claim 1 wherein the value of E is a function of the accuracy of the UT local oscillator and where information that specifies the accuracy of the UT local oscillator is stored in a home GW of the UT and is transferred from the home GW to a serving GW when the UT is roaming as required by claim 15; a method as claimed in claim 1 wherein the value of E is a function of the accuracy of the UT local oscillator and where information that specifies the accuracy of the UT local oscillator is stored in or is determined by the UT and is transferred to the GW as required by claim 16; a method as in claim 1 wherein the UT is granted service if the value of E is less than CL and where the GW sets the value of CL to be less than a possible minimum value of E for excluding all UTs from operating within the exclusion zone as required by claim 17; and a method as in claim 1 wherein the UT is granted service if the value of E is less than CL and where the

GW sets the value of CL to be greater than a possible maximum value of E for enabling all UTs to operate within the exclusion zone as required in claim 18.

Therefore, Appellants respectfully disagree that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Alperovich et al in view of Maeda et al with the use of the value of E is a function of the accuracy of the UT local oscillator and where information that specifies the accuracy of the UT local oscillator is stored in the UT as taught by Ishikawa et al for the purpose of determining the estimated position of the mobile earth station relative to its true position.

Appellants gratefully acknowledge the allowance of claim 26 and note the basis for allowance. The Examiner states regarding claim 26 the prior art of record considered alone or in combination neither anticipates nor renders obvious a mobile satellite communication system comprising at least one gateway, at least one user terminal, and a constellation of satellites, said GW comprising a controller for controlling operations of said UT and further comprising an interface to at least one of the Public Switched Telephone Network (PSTN) or to the Internet, said GW storing a database containing at least one of a Confidence Polygon, a Confidence Volume, or a Confidence Surface to establish a geometric shape located on the earth, above the earth or in space, or combinations thereof, said GW further storing a static or a variable Confidence value that is compared to a value of an error (E) in a position location of the UT, said controller acting upon the database and assigned or derived values of CL and E, to determine if a comparison of CL and E, combined with a current position of the UT, yields a certain result according to the operational mode of the GW controller, wherein depending on the operational mode of the GW the result of the comparison affects control of the UT or an external device attached to the UT, whereby the UT is forbidden or allowed to access the mobile satellite system or to make or receive a call, or depending on the operational mode of the GW the result of the comparison affects some operational characteristic of the UT to provide an ability to protect a site from UT emissions.

Appellants respectfully note that the prior art of record provided numerous teachings of methods for call blocking in a satellite-based network. However, the prior art of record failed to specifically disclose to determine if a comparison of CL and E, combined with a current position of the UT, yields a certain result according to the operational mode of the GW controller, wherein depending on the operational mode of the GW the result of the comparison affects control of the UT or an external device attached to the UT, whereby the UT is forbidden or allowed to access the mobile satellite system or to make or receive a call, or depending on the operational mode of the GW the result of the comparison affects some operational characteristic of the UT to provide an ability to protect a site from UT emissions as set out by the Examiner for reasons of the allowance of claim 26.

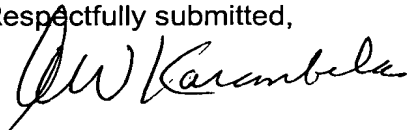
Appellants respectfully contend that all of the above reasons cited to support the allowance of system claim 26 apply as well to rejected claims 1-25.

Appellants respectfully submit that in view of the previous recitation by the Examiner for the allowance of claim 26 and the remarks made above, all of the claims have been shown to contain non-obvious patentable subject matter and to be patentably distinguishable over the prior art of record, Alperovich et al, Martti et al, Maeda et al, and Ishikawa et al, alone or in combination.

Appellants respectfully submit that in view of the above remarks all of the claims presently under prosecution have been shown to contain patentable subject matter and to be patentably distinguishable over the prior art cited by the Examiner, alone or in any combination.

Accordingly, Appellants respectfully request that the final rejection of the primary Examiner be reversed.

Respectfully submitted,



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CLAIMS APPENDIX

Claims 1-26 as presented below are currently pending in this application.

1. A method for operating a mobile satellite communication system having at least one gateway (GW), at least one user terminal (UT), and a constellation of satellites, comprising steps of:

for a site to be protected from UT transmissions, specifying an exclusion zone having a confidence limit (CL) associated therewith; and

selectively providing service to a UT depending on a determined location of the UT relative to the exclusion zone and on an estimated error (E) of the determined UT location.

2. A method as in claim 1, wherein the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface.

3. A method as in claim 1, wherein location of the UT is determined by the UT, and transmitted to the GW.

4. A method as in claim 1, wherein location of the UT is determined by the UT in cooperation with the GW.

5. A method as in claim 1, wherein location of the UT is determined by the GW.

6. A method as in claim 1, wherein the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface, and further considers at least one of RF obstructions and terrain features.

7. A method as in claim 1, wherein the UT is granted service if the value of E is less than CL.

8. A method as in claim 1, wherein the exclusion zone is specified to comprise a polygon defined by connected points on the surface of the earth.

9. A method as in claim 1, wherein the exclusion zone is specified to comprise a volume defined by connected points on the surface of the earth and at least one point located above the surface of the earth.

10. A method as in claim 1, wherein the exclusion zone is specified to comprise a surface defined by at least two connected points on the surface of the earth and at least point located above the surface of the earth.

11. A method as in claim 1, wherein boundaries of the exclusion zone are static.

12. A method as in claim 1, wherein boundaries of the exclusion zone are dynamic and capable of at least one of movement or change in shape.

13. A method as in claim 1, wherein the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the UT.

14. A method as in claim 1, wherein the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the GW.

15. A method as in claim 1, wherein the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in a home GW of the UT, and is transferred from the home GW to a serving GW when the UT is roaming.

16. A method as in claim 1, wherein the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in or is determined by the UT and is transferred to the GW.

17. A method as in claim 1, wherein the UT is granted service if the value of E is less than CL, and where the GW sets the value of CL to be less than a possible minimum value of E for excluding all UTs from operating within the exclusion zone.

18. A method as in claim 1, wherein the UT is granted service if the value of E is less than CL, and where the GW sets the value of CL to be greater than a possible maximum value of E for enabling all UTs to operate within the exclusion zone.

19. A method as in claim 1, wherein there are overlapping exclusion zones specified, each having a different value of CL.

20. A method as in claim 1, wherein the exclusion zone is temporary and is established and removed as a function of time.

21. A method as in claim 1, wherein the values of at least one of CL and E vary as a function of time.

22. A method as in claim 1, wherein at least one of the location or shape of the exclusion zone varies as a function of a change in location of the UT.

23. A method as in claim 1, wherein at least one of the location or shape of the exclusion zone varies as a function of a change in location of the GW.

24. A method as in claim 1, wherein at least one of the location or shape of the exclusion zone varies as a function of a change in location of the protected site.

25. A method as in claim 1, wherein the exclusion zone is shared between at least two gateways.

26. A mobile satellite communication system comprising at least one gateway (GW), at least one user terminal (UT), and a constellation of satellites, said GW comprising a controller for controlling operations of said UT and further comprising an interface to at least one of the Public Switched Telephone Network (PSTN) or to the Internet, said GW storing a database containing at least one of a Confidence Polygon, a Confidence Volume, or a Confidence Surface to establish a geometric shape located on the earth, above the earth or in space, or combinations thereof, said GW further storing a static or a variable Confidence Limit (CL) value that is compared to a value of an error (E) in a position location of the UT, said controller acting upon the database and assigned or derived values of CL and E, to determine if a comparison of CL and E, combined with a current position of the UT, yields a certain result according to the operational mode of the GW controller, wherein depending on the operational mode of the GW the result of the comparison affects control of the UT or an external device attached to the UT, whereby the UT is forbidden or allowed to access the mobile satellite system or to make or receive a call, or depending on the operational mode of the GW the result of the comparison affects some operational characteristic of the UT to provide an ability to protect a site from UT emissions.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.